

REMARKS

Claims 1-55 were rejected by the Patent Office under 35 USC § 102 as having been “described in a patent granted . . . before the invention thereof by the applicant for the patent.” Re-examination and reconsideration of the application, in view of the following remarks, are requested. Re-examination and reconsideration of the application, in view of the following remarks, are requested.

Anticipation under 35 USC § 102 requires that a single piece of prior art shows each and every element of a patent claim. [Manual of Patent Examining Procedure §706.2 at p 700-23]. “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The McNitt, et. al. patent (US 6,567,536), hereafter “McNitt”, as cited by the Patent Examiner, does not anticipate the claims of Application 10/815,237 as Application 10/815,237 contains claims and limitations that are not present in the cited prior art. Applicant respectfully traverses this rejection for at least the following reasons.

Claim 1. McNitt **does not** disclose a method that involves **defining a standard motion or comparing the motion under analysis to a standard motion**. (See McNitt Abstract¹) McNitt’s system involves 1) sensing information—video, positional information, weight transfer, etc.; 2) synchronizing that information; and 3) presenting that information so that the video is displayed simultaneously with calculations and other analysis information derived from the sensing information gathered in step 1. (Abstract) **No reference** is made to defining a standard motion or to the comparison of the motion being captured to the standard motion.

The reference cited by the Examiner to McNitt column 16, lines 48-64 **does not** disclose the comparison of the first signal and the second signal. The referred-to paragraph describes the process by which the sensing information is **received**. McNitt describes that the information can be obtained either simultaneously or substantially

¹ All references hereafter shall be to McNitt, et. al. patent number 6,567,536 unless otherwise noted.

simultaneously. No comparison of the first and second signal is described and no comparison to an external standard is contained therein.

Applicant concedes that McNitt discloses the receipt of information from a first sensor, the receipt of information from a second sensor and the synchronization of the information from the first sensor and second sensor. It is for that reason that these were not made independent claims. These claims are subject to the limitation that the information gathered is to be compared against a defined standard motion.

The McNitt system allows the user to answer the question, "What did the athlete do?" The Murphy system allows the user to answer the question, "How does the action differ from what ought to have happened?" Both are useful answers. However, the answer to the second is not disclosed by the first.

Claim 2. McNitt **does not** disclose a method of identifying when the motion under analysis falls outside of an acceptable range of motion in relation to the standard motion. As described above, and incorporated herein, the McNitt patent makes no mention of comparison to a defined standard motion.

Furthermore, the citation to column 9, lines 38 – 62 **does not** disclose the method of claim 2. The referred-to citation details the process by which the system determines what information to retain and what information to discard. McNitt describes using a triggering event to determine "which video frame and positional measurement information samples should be synchronized." (column 9, lines 38-39). He further details that the trigger event is used to determine a "timing window." (column 9, lines 47 – 50). Finally, he states that if the collected data (sensing information) does not occur within the timing window, it is discarded. (column 9, lines 52-55). The cited reference makes **no disclosure** of comparing when a motion deviates from an acceptable range around a defined standard. The cited reference defines using a trigger event to determine what information is to be retained and what information is to be discarded.

Claim 3. McNitt **does not** disclose a method of adjusting the motion under analysis based on the comparison of the synchronized first signal and second signal to the

standard motion. As described above, and incorporated herein, the McNitt patent makes no mention of comparison to a defined standard motion.

The reference cited by the Examiner, column 13, lines 13-49, **does not** disclose a method of adjusting the action being analyzed based on the results of the comparison of the action to a defined standard. The cited paragraph describes a method whereby the user can click on a button to move to the data and video that correspond to a specific part of the action under analysis. The examples given include the address, impact, top of swing, and finish of a golf swing. (column 13, lines 29-45). In other words, **it discloses a method of moving within the synchronized data from the display screen**. It makes no disclosure as to the adjustment of the action itself let alone in relationship to a comparison of the action to a defined standard.

Claim 4. The McNitt patent **does not** disclose a method comprising the logging of an intended result of the motion under analysis. McNitt makes no reference whatsoever as to the result of the action under analysis. Using the McNitt example of a golf swing as the motion being analyzed, the result of the action would include such information as draw, fade, hook, slice, backspin, topspin, “in the fairway”, “on the green”, yardage, etc. The action being studied ought to change when the intended result changes. If a player **wants** to hit a draw shot (the ball starts right and curves to the left), he will utilize differing mechanics than if he wants to hit it straight or with a fade (ball starts left and curves right). The McNitt patent allows the user to determine what the actor did. The Murphy application goes further and allows the user to also know what the actor intended to do, and if the actor accomplished that goal (Murphy claim 5).

The cited reference, column 4, lines 34-54, discloses the gathering of information about the actor—the person swinging the golf club. The disclosure of McNitt is focused exclusively on the motion under analysis. No reference whatsoever is made regarding the result of the action.

Claim 5. The reference to McNitt column 16, lines 48-64 does not disclose the comparison of the first signal and the second signal as cited by the Examiner. The referred-to paragraph describes the process by which the sensing information is **received**.

McNitt describes that the information can be obtained either simultaneously or substantially simultaneously. No comparison of the first and second signal is described.

Additionally, as discussed under Claim 4 above and incorporated herein, the McNitt patent makes no reference to an intended result. Therefore, it cannot disclose adjustment of the motion under analysis when that motion is compared to an intended result.

Claim 6. The method claimed in claim 6 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

Claim 7. The method claimed in claim 7 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

Claim 8. The method claimed in claim 8 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

Claim 10. The method claimed in claim 10 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

Claim 11. The method claimed in claim 11 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

Claim 12. The method claimed in claim 12 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard

motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 12 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 13. The method claimed in claim 13 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 13 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 14. The McNitt patent **does not** disclose the reconstruction of the motion under analysis. The cited reference, Fig 1, column 4, lines 13-33, discloses a method of capturing data (video, positional), synchronizing that data (column 4, lines 15-17), and presenting the data for use in correction and instruction (column 4, lines 23-25) related to the motion under analysis. Put simply, the McNitt patent discloses the capture, synchronization and display of video and positional information

For example, claim 14 of the Murphy application could be implemented in the analysis of a lap taken by a race car driver. The presentation of video of the lap taken by the driver and associated data as set forth in the McNitt patent is of little use. Watching a car go around a track, even with data associated with the video does not allow for correction. In contrast, the Murphy application would create a reconstruction of the route taken by the vehicle, display that route in comparison with a "perfect lap", show where the route deviated from an acceptable range around the "perfect lap", and display the results of that deviation (e.g., decreased exit speed from a turn, slower lap time, etc.). In this embodiment, the reconstruction of the motion under analysis and the comparison to the standard (or acceptable range around the standard) is not disclosed by the McNitt patent which only discloses the capture and presentation of synchronized video and data.

Claim 15. As stated above in response to claim 14 and incorporated herein, the McNitt patent does not disclose the reconstruction of the motion under analysis and therefore cannot disclose the comparison of the reconstructed motion to the standard motion. . Even assuming *arguendo* that the reconstruction of a motion under analysis is inherent in the McNitt patent, it does not disclose the comparison of the reconstructed motion against either a defined standard or an acceptable range of motion around a defined standard.

The reference cited by the Examiner, column 16, lines 48-64, describes the receive operation of the McNitt embodiment. It discloses receiving a first signal (column 16, lines 48-52), receiving a second signal (column 16, lines 52-56), and finally it states that the first signal and second signal may be either received simultaneously or substantially simultaneously (column 16, lines 58-63). The signals are not compared to each other, nor are they compared to a standard motion. In fact, the very next paragraph makes it clear that the signals are **synchronized**, not compared. (column 16, line 64 to column 17, line 17).

Claim 16 is withdrawn.

Claim 17. While McNitt discloses the display of the first signal and second signal, it **does not disclose** the composite display of the reconstructed motion under analysis and the video signal.

As addressed above under claim 14 and incorporated herein, McNitt does not disclose the reconstruction of the motion under analysis and therefore cannot disclose the overlay of the reconstructed motion over video of the actual motion.

Continuing the example of the race car driver as set forth under claim 14 above, the Murphy application discloses superimposing the reconstructed motion over actual video of the car as it travels the course. The purpose of this composite display is to verify that the reconstructed motion coincides with the actual motion. In other words, athletes often do not believe what the data shows without visual verification. If, using the race car example, the data shows that the back end of the car lost traction, the driver may have a faulty recollection and believe that it did not. When the reconstructed motion is

superimposed on the video, he or she can visually confirm what the data identifies. The Murphy system uses the reconstructed motion to show where a deviation from the standard occurs and supports the graphic representation of the reconstructed motion with actual video of the motion under analysis. None of this is disclosed by the McNitt patent.

Claim 18 is withdrawn.

Claim 20. McNitt does not disclose a standard motion whatsoever, and therefore cannot disclose a standard motion that consists of an ideal motion for the subject executing the motion.

As discussed under claim 1 and incorporated herein, the McNitt patent makes no reference to a standard motion.

The reference cited by the Examiner, column 17, line 64 through column 18, line 12, makes no mention whatsoever to an ideal motion or to a standard motion. The cited reference sets forth the elements of the “positional measurement acquisition process.” (column 17, lines 65-66). It then further sets forth an embodiment of the positional acquisition process that utilizes a software program to acquire positional information associated with a golfer’s swing. (column 17, line 67 through column 18, line 12). In other words, the cited paragraph describes how the embodiment acquires information about the motion being studied—in McNitt’s example, a golf swing.

Every athlete has a different physiology. Sometimes, those differences make it impossible to perform to a generally acceptable ideal. Other times, an athlete has mastered a form that differs significantly from the generally accepted ideal. Take, for example, Richard “Dick” Fosbury. Prior to the 1968 Olympics, the generally accepted ideal manner in which to clear the high jump was to take off from the inside foot and swing the outside foot over the bar. Dick Fosbury won the gold medal by completely changing his takeoff method and leaping from his outside foot. (http://www.olympic.org/uk/athletes/profiles/bio_uk.asp?par_i_id=18061). If his motion were to be analyzed in relation to a generally accepted standard, it would be wrong each and every time. Therefore, when analyzing his form, it would be against a standard as

defined by the athlete himself—the Fosbury Flop. Claim 20 discloses that the standard motion would be defined by the athlete's own “best form.”

Claim 21. McNitt does not disclose a standard motion whatsoever, and therefore cannot disclose a standard motion that is defined by the user.

As discussed under claim 1 and incorporated herein, the McNitt patent makes no reference to a standard motion. McNitt cannot therefore make reference to a standard motion defined by the user.

A teacher can have radical ideas on what form is effective for a sport. An oft-analyzed physical motion is that of the baseball pitcher. In teaching pitchers how to improve the velocity on their fast ball, different teachers emphasize different aspects of form as having the greatest impact. Some believe that it is arm strength, some leg stride, others release point. The system disclosed by Murphy, and claim 21 specifically, allows each individual teacher to set the standard to their personal preference and measure the motion under analysis to that standard. In an alternate embodiment, it allows for the testing of a hypothesis. If a teacher believes that leg stride is the best predictor of velocity, he can set the standard at some defined standard, such as 100% of the player's height, determine whether the player achieves that standard (or falls within an acceptable range around the standard), and ultimately determine if the hypothesis is true (highest velocity is positively correlated with achieving the standard). Nowhere within the McNitt patent is this scenario possible. The McNitt patent is about determining what a player is doing at a given moment in time, not about determining a standard and comparing the motion under analysis to that standard.

Claim 22. The method claimed in claim 22 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 22 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 23. The method claimed in claim 23 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 23 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 24. The method claimed in claim 23 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 23 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 25. McNitt does not disclose a method of acquiring environmental data. All of the data acquired under the McNitt system is related to the motion under observation.

McNitt's narrative on the background of the invention is informative. In his narrative, McNitt discloses that video is an oft-used teaching tool. (column 1, lines 24 – 41). He then describes the drawbacks of a video-only system. (column 1, lines 42 – 55). McNitt goes on to explain how motion or positional analysis systems have been used to overcome the drawbacks described, but how they do not solve all problems. (column 1, line 56 through column 2, line 11). Most importantly, McNitt describes the manual and subjective process of mapping the motion data points to the captured video. (column 2, lines 12-30). It is primarily this problem that the McNitt system solves, by 1) capturing video and data **about the athletic motion** (column 2, line 60), 2) synchronizing the data and video (column 2, line 60), and 3) the display of the synchronized video and data for analysis (column 11, lines 39-47, column 11, line 65 through column 12, line 6, and column 12, lines 25-43). Every description of data captured by the McNitt system relates

to the motion under analysis. (see, e.g., column 7, lines 12-14 [magneto sensitive sensors placed on golfers body], and column 7, line 36 through column 8, line 30 [discussing coordinate system for measurement of movement of golf swing (rotation of hips, shoulders, wrist, head)]).

Nowhere does McNitt discuss the capture of environmental data such as wind speed and direction, temperature, distance above sea-level, humidity, slope and pitch of the playing surface, etc. These environmental factors are outside of the motion under observation and arguably impact performance of athletic movements (citing generally FIFA's recent ban on soccer matches at high altitude stadiums). The Murphy application incorporates environmental factors into the study of the motion under analysis.

The passage cited by the Examiner, column 4, lines 34-54, refers to a "process environment." The "process environment" described by McNitt is not an external or environmental factor, but rather is the place where processes associated with the system take place. These processes include the synchronization of the video and data streams (column 4, line 43) and the generation of analysis information (column 4, lines 43-46). It does not include environmental data—data external to the motion under analysis.

Examiner further cites column 24, lines 26-34 as having disclosed "synchronizing the third signal to the first signal and the second signal; and analyzing the motion under analysis represented by the synchronized first signal and second signal in relation to the third signal." The cited passage refers to a third signal "**sensing a third type of information associated with the human physical motion.**" (column 24, lines 29-30). It **does not** compare the synchronized first and second signal in relation to the third signal. The McNitt patent discloses obtaining additional information about the athlete and his or her motion.

The Murphy application discloses comparing the performance of the action under differing states of the third signal. For example, the Murphy system would compare wrist speed of a baseball player at different temperatures. If it was determined that wrist speed (and correspondingly pitch velocity) was adversely affected by a decrease in temperature, a player could adjust his or her pitch selection to rely more on curve balls and ball placement rather than trying to overpower batters in colder weather. (See, also, Murphy

application at paragraph 0045 [discussing environmental factors affecting the kicking of a field goal]). The McNitt system makes no reference whatsoever to environmental factors and does not disclose comparing the motion under analysis in relation to a third signal comprised of environmental data.

Claim 26. McNitt **does not** disclose receiving a fourth signal from a fourth sensor, the fourth sensor being representative of a mechanical or electrical parameter.

The reference cited by the Examiner, column 18, lines 34-48, details how, in an embodiment, video is captured. The specific reference to “parameters” relates to video captured at “60 Hz . . . 240 lines per field” or alternately that “these parameters” (referring to the 60Hz, 240 lines per field parameters) might be defined by the software manufacturer. (column 18, lines 43-47). It makes no reference to the capture of mechanical or electrical information. It sets forth one set of parameters for the capture of video into the processing system.

The Murphy application discloses the capture of information related to mechanical or electromechanical objects and not limited to human actors and actions. (See application at paragraph 0021). For example, if a user were studying a bicycle rider on a velodrome, one of the mechanical parameters captured might be torque generated at various speeds. The results of the analysis would be useful in determining the appropriate pedal lengths and gearing for the bicycle/rider combination. The measurement of torque is independent of the capture of the movement of the rider as it is dependant on the mechanical structure of the bicycle that translates the cyclist’s movement into useable force.

The Examiner further cites column 22, line 62 through column 23, line 14 as disclosing “synchronizing the fourth signal to the first signal and the second signal; and analyzing the motion under analysis represented by the synchronized first signal and second signal in relation to the fourth signal.” **It does not.** The cited reference describes how an instructor chooses what content is pertinent to be uploaded in an embodiment of providing a web-based lesson. There is **no reference** to a fourth sensor. There is **no reference** to analyzing the synchronized first signal and second signal in relation to the fourth signal. The only reference that can be remotely related to the Murphy claim is the

use of the word, “fourth.” However, the word is used to describe how a user may choose to mark the third swing as being relevant content “before the fourth swing.” (column 23, line 6).

Utilizing the bicycle example above, it might be useful to analyze the motion of the cyclist when torque is at a maximum, or alternately, when torque is at a minimum. The information gathered by the first sensor (video in this example) and information gathered from the second sensor (positional data in this example) would be analyzed at those moments when the mechanical parameters (torque) are at maximum or minimum. Nothing in the McNitt patent discloses this.

Claim 27. McNitt **does not** disclose a method providing visual feedback when the motion under analysis falls outside of an acceptable range of motion. As described above under claim 1, and incorporated herein, the McNitt patent makes no mention of comparison to a defined standard motion. As described above under claim 2, and incorporated herein, the McNitt patent makes no mention of comparison to range around a defined standard motion.

Examiner’s citation to column 9, lines 38 – 62 does not disclose the method of claim 27. The referred-to citation details the process by which the system determines what information to retain and what information to discard. McNitt describes using a triggering event to determine “which video frame and positional measurement information samples should be synchronized.” (column 9, lines 38-39. He further details that the trigger event is used to determine a “timing window.” (column 9, lines 47 – 50). Finally, he states that if the collected data (sensing information) does not occur within the timing window, it is discarded. (column 9, lines 52-55). The cited reference makes no disclosure of comparing when a motion deviates from an acceptable range. It therefore cannot disclose providing visual feedback when the motion under analysis falls outside the acceptable range of motion. The cited reference merely defines a method determining what information is to be retained and what information is to be discarded.

Claim 30. The method claimed in claim 30 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard

motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 30 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 32. The McNitt patent does not disclose the **acquisition** of data via a network. The reference cited by the Examiner, column 23, lines 35-43) discloses the presentation and control of the **display** of information via the internet. There is a fundamental difference in acquiring data via directly connected devices versus devices connected to a network. Issues such as latency, data loss, security, etc. affect data as it travels over a network. The act of adjusting focus on a video camera is simple when it is physically present. When the camera is sending data from a remote location, adjusting focus requires either a software or mechanical system to accomplish what the human operator accomplishes when present at the location.

Also, the method claimed in claim 32 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

Claim 33. The above arguments related to claim 32 are incorporated herein.

Claim 35. McNitt **does not** disclose the use of an intended result in any manner whatsoever.

The cited reference—column 13, lines 13-49—**does not** disclose a method wherein the input device receives data representing an intended result of the motion under analysis. The cited paragraph describes a method whereby the user can click on a button to move to the data and video that correspond to a specific part of the action under analysis. The examples given include the address, impact, top of swing, and finish of a golf swing. (column 13, lines 29-45). In other words, it discloses a method of moving within the synchronized data from the display screen.

As set forth under Claim 4 above, and incorporated herein, McNitt makes no disclosure of the use of an intended result.

Claim 37. The method claimed in claim 37 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 37 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 39. The method claimed in claim 39 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 39 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claim 41. The method claimed in claim 41 is limited by the definition of a standard motion and the comparison of the motion under analysis and the standard motion. As set forth above under claim 1, McNitt discloses neither the defining of a standard motion nor the comparison of the motion under analyses to the standard motion.

The method of claim 41 is further limited by the language of claim 2, which describes a method whereby the motion under analysis is determined to fall within or outside of a range around the defined standard motion.

Claims 9, 19, 28, & 31. Examiner states that they are similarly analyzed as are claims 1, 7, 8 and 27. Applicant likewise refers to the above-referenced refutations.

Addressing **claim 19** specifically, McNitt does not disclose a standard motion whatsoever, and therefore cannot disclose a standard motion that consists of a generally accepted standard motion.

As discussed under claim 1 and incorporated herein, the McNitt patent makes no reference to a standard motion.

The Murphy application differs in that 1) it utilizes a standard motion in the analysis and 2) under claim 19 specifically, it utilizes a generally accepted ideal as the standard motion. An example of this would be the use of the Murphy system by a gymnast who performs a vault. At a minimum, the landing of a vault is governed by a generally accepted ideal—that the gymnast “stick” the landing (i.e., no movement of the feet after landing). The Murphy system would acquire data about the gymnast’s vault, including his or her landing, compare the landing to the ideal, identify whether the gymnast met the ideal, fell within an acceptable range around the ideal, or fell outside of the acceptable range. If the gymnast failed to meet the ideal, the system would then identify the reasons for the failure, such as rotation too late in the vault, incorrect body angle on landing, etc. The McNitt patent would allow the user to do two things and only two things—capture data and video of the motion and display that video and data (or positional information derived from that data) for the user. As McNitt sets forth in the Abstract, his system is intended to capture data and video, synchronize those streams, and display the synchronized data and video. **It does not compare** the motion to anything, let alone an external standard.

Claims 29, 34, 36, & 38. Examiner states that they are similarly analyzed as are claims 1, 3, 8 and 21. Applicant likewise refers to the above-referenced remarks.

Claim 40 & 42-47. Examiner states that they are similarly analyzed as are claims 1, 10, 12, 13, 14, and 20. Applicant likewise refers to the above-referenced remarks.

Claims 48-55. Examiner states that they are similarly analyzed as are claims 1, 10, 14, 15, 16 and 17. Applicant likewise refers to the above-referenced remarks.

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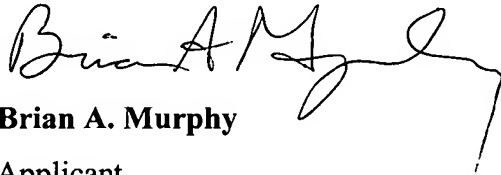
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Application No. 10/815,237
Reply to Office Action dated 4/23/2007

In light of the above remarks, Applicant believes that the claims are in condition for allowance and respectfully requests favorable reconsideration of the claims as contained herein.

Respectfully,

A handwritten signature in black ink, appearing to read "Brian A. Murphy". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Brian A. Murphy

Applicant

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